



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,433	10/17/2003	Juan J. Becerra	107044-0040	1554

24267 7590 05/30/2006
CESARI AND MCKENNA, LLP
88 BLACK FALCON AVENUE
BOSTON, MA 02210

EXAMINER

KALAFUT, STEPHEN J

ART UNIT PAPER NUMBER

1745

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/688,433	Applicant(s) BECERRA ET AL.	
	Examiner Stephen J. Kalafut	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-26 is/are allowed.
- 6) ☒ Claim(s) 1-13, 16-19, 22 and 27 is/are rejected.
- 7) ☒ Claim(s) 14, 15, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date (<u>4 dates</u>). | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 1745

Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no antecedent for "said neat methanol" in claim 3 or its parent claim 1. Should claim 3 depend on claim 2? Claim 4 contains the trademark/trade name Carbopol EZ-3. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a polymer and, accordingly, the identification/description is indefinite.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 10-12 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Wesley *et al.* (US 5,773,706).

Art Unit: 1745

Wesley *et al.* disclose a gelled organic fuel composition comprising an organic molecule and polyacrylic acid (column 2, lines 43-63). The preferred organic molecule is a lower alcohol (column 3, lines 16-17) such as methanol (TABLE 4 in column 16). Since water is optional (column 3, lines 11-13), and since the polymer is present between 0.1 to 10 weight percent (column 55-59), the methanol (or other organic molecule) may be pure (“neat”), and comprise between 90 and 100 weight percent of the overall gel. The composition also includes an alkaline substance that neutralizes the acidic polymer (column 4, lines 5-16), thus modifying the pH of the gel. The gel may comprise a colorant, a blue dye (column 18, line 51), which would be a type of presently recited safety-enhancing additive. Regarding claim 12, the gel may also comprise an “auxiliary Theological [sic] additive” (column 4, lines 57-59). In this embodiment, the “Theological additive” would correspond to the “thickening substance” of claim 1, and the polyacrylic acid would correspond to the “polymeric additives” of claim 12. The recitation of intended use “for use in a fuel cell” does not distinguish.

Claims 1, 4 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by *Solutions Close To Home*, “Methanol Solid Fuel Gel/Fire Starter”, cited by applicants.

This article discloses a composition comprising the carbonaceous fuel methanol, the thickener Carbopol EZ-3 and the pH modifying additive triisopropanolamine (“Formulation” section). The recitation of intended use “for use in a fuel cell” does not distinguish. Although the month of this publication is not listed, its publication year of 2001 is entirely over a year before the filing date of the present application.

Art Unit: 1745

Claims 13, 16-19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanehara *et al.* (JP 2-234,358).

Kanehara *et al.* disclose a fuel cell cartridge comprising a compartment (13) for holding a gel fuel (abstract, lines 4-6), and a vapor-permeable membrane (14), through which fuel and water vapor pass from the compartment into the anode (21) section of a fuel cell. The membrane would correspond to the present "FVPL". The fuel compartment (figure 3) may include features (5) that increase surface area, and a seal (40) that retains the fuel within the cartridge (figure 1B). The operation of this fuel cell would involve providing the fuel within a gel (abstract, lines 4-6), evaporating fuel out of the gel (abstract, lines 8-10), and directed the evaporated fuel through a "FVPL" to a fuel cell (abstract, lines 10-13). The fuel cell includes an electrolyte membrane (16), an anode (21) including a catalyst (20), a cathode (22) including a catalyst (23), a means of water supply (67 and 68 in figure 6) from the cathode to the anode, and an electrical coupling for supplying power to an application device (24).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wesley *et al.*

These claims differ from Wesley *et al.* by reciting varying amounts of the components of the gel, or its pH, which is dependent on some of these amounts. Because the skilled artisan would be familiar with the effect these amount would have on the properties of the gel such as the amount of thickener on mechanical properties or the amount fuel on heat produced, determining an optimal formulation would be within the skill of such an artisan. For this reason, these claims would be obvious over Wesley *et al.*

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wesley *et al.* in view of Berté *et al.* (US 5,744,694).

This claim differs from Wesley *et al.* by reciting sodium hydroxide as the pH-modifying additive. Berté *et al.* disclose a gel including an organic liquid with an unsaturated carboxylic acidic polymer (column 2, lines 14-16), where the polymer may be neutralized with an alkali metal or alkaline earth metal hydroxide (column 3, lines 24-25), of which NaOH is a type. Since this is the same type of polymer as used by Wesley *et al.*, this would teach that alkaline hydroxides would be an effect base with which to neutralize those polymers. For this reason, it would be obvious to use an alkaline hydroxide such as NaOH as shown by Berté *et al.* in the gelled fuel of Wesley *et al.*

Claims 14, 15, 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art cited herein or by applicants does not teach

Art Unit: 1745

the fuel cartridge with an "FVPL" that allows fuel vapor to pass through, but not water; or the use of the composition recited in claim 20 in a fuel cell.

Claims 23-26 are allowed. The prior art does not disclose a fuel cartridge containing a gel fuel, which is coupled to both a fuel cell and a container for refueling the cartridge with gel, where the fuel is evaporated from the gel and delivered to the fuel cell.

The disclosure is objected to because of the following informalities: The numeral 109 in figure 1 is not identified in the specification. The numerals 414 and 416, on page 21, line 2, are not found in figure 4B. Appropriate correction is required.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mann *et al.* (US 2004/0076861) disclose a fuel cartridge in which the fuel is stored in separate storage areas (104).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sjk

A handwritten signature in black ink, appearing to be 'SKA' or similar, written in a cursive style.

STEWART & LEE
PRIMARY EXAMINER
GROUP

1700